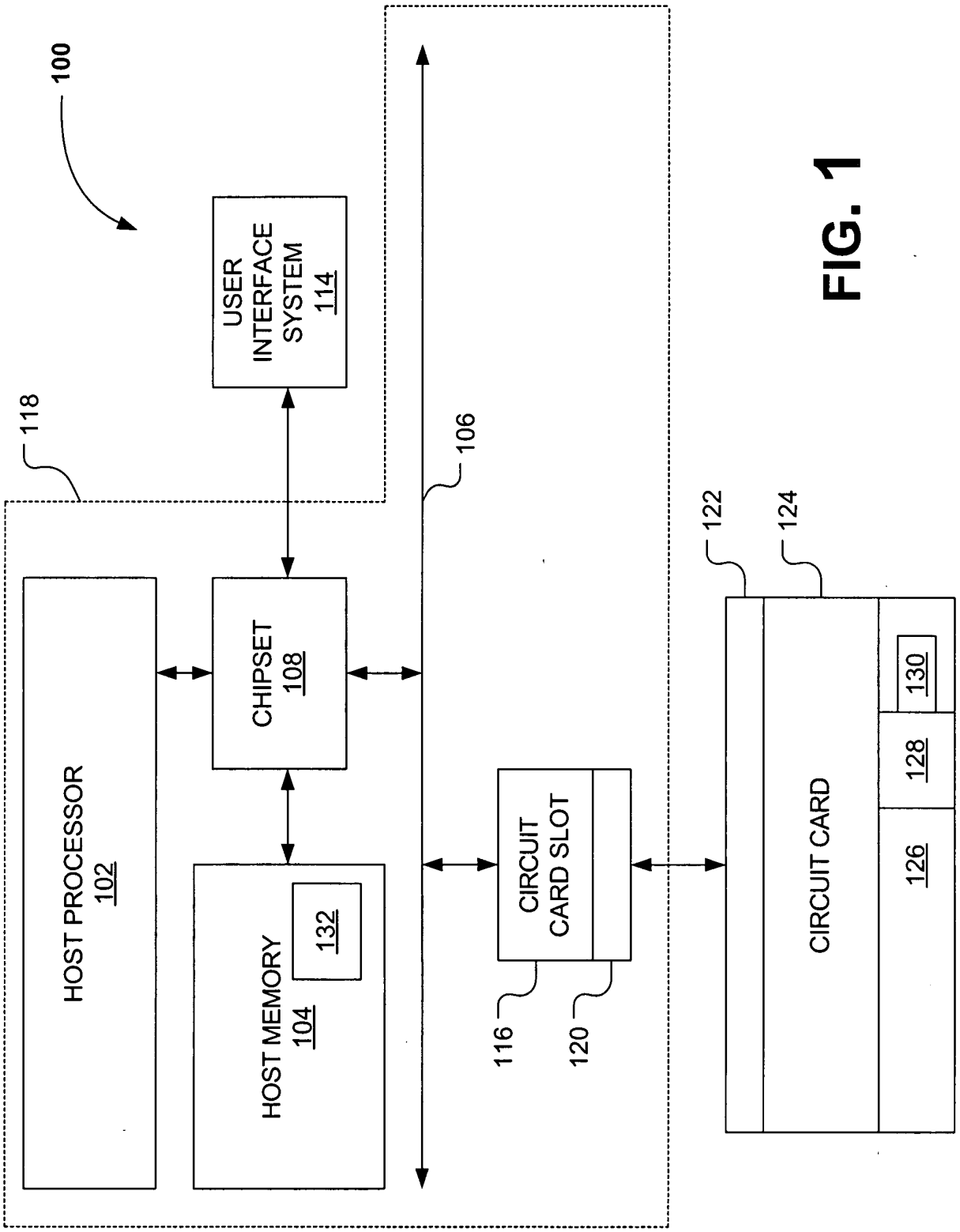
100
USER INTERFACE SYSTEM 114
118
106
122
124
HOST PROCESSOR 102
CHIPSET 108
HOST MEMORY 104
132
CIRCUIT CARD SLOT
116
120
CIRCUIT CARD
130
128
126

FIG. 1

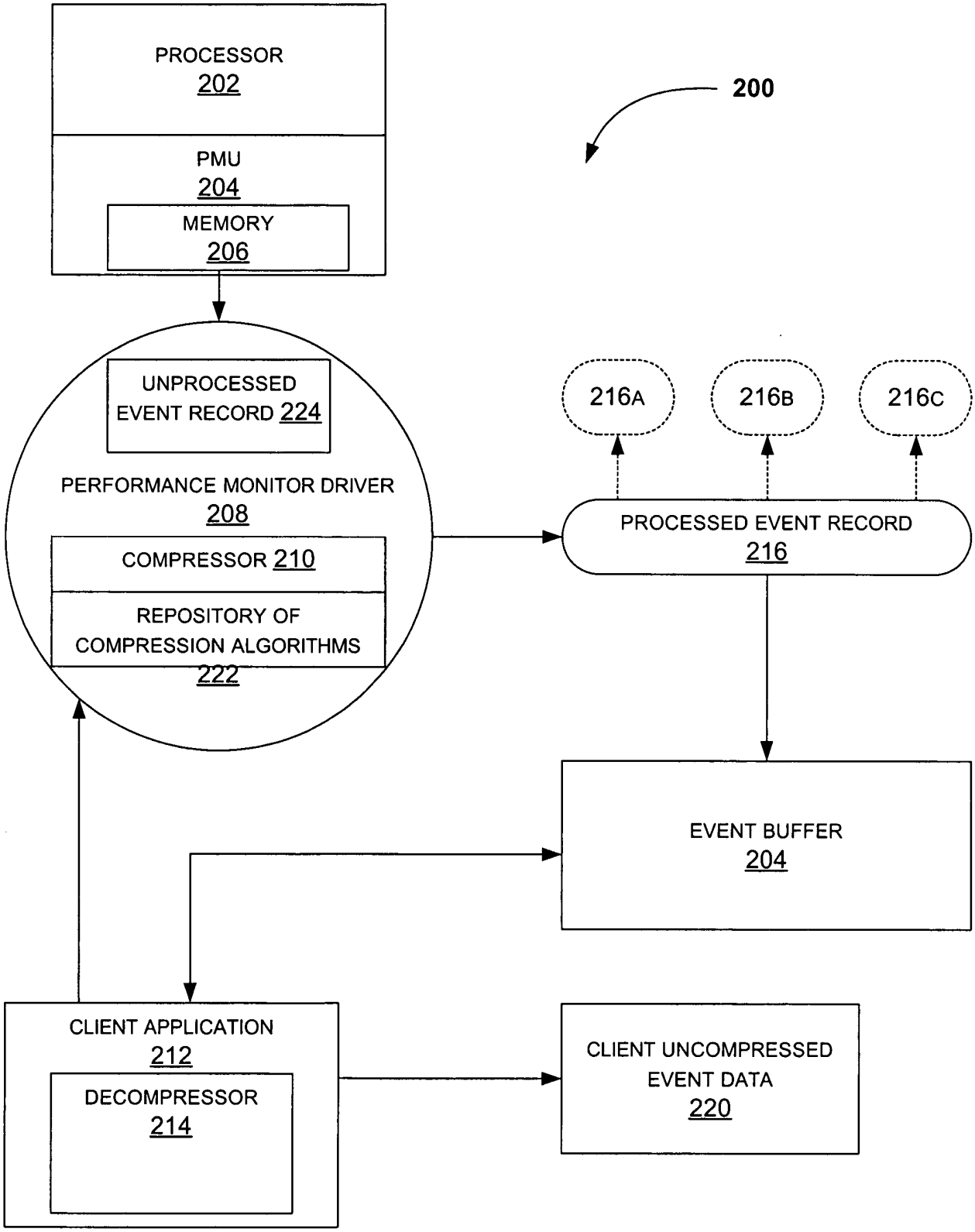
PROCESSOR
202
200
PMU
204
MEMORY
206
UNPROCESSED
EVENT RECORD 224
216A
216B
216C
PERFORMANCE MONITOR DRIVER
208
COMPRESSOR 210
REPOSITORY OF
COMPRESSION ALGORITHMS
222
PROCESSED EVENT RECORD
216
EVENT BUFFER
204
CLIENT APPLICATION
212
DECOMPRESSOR
214
CLIENT UNCOMPRESSED
EVENT DATA
220

FIG. 2

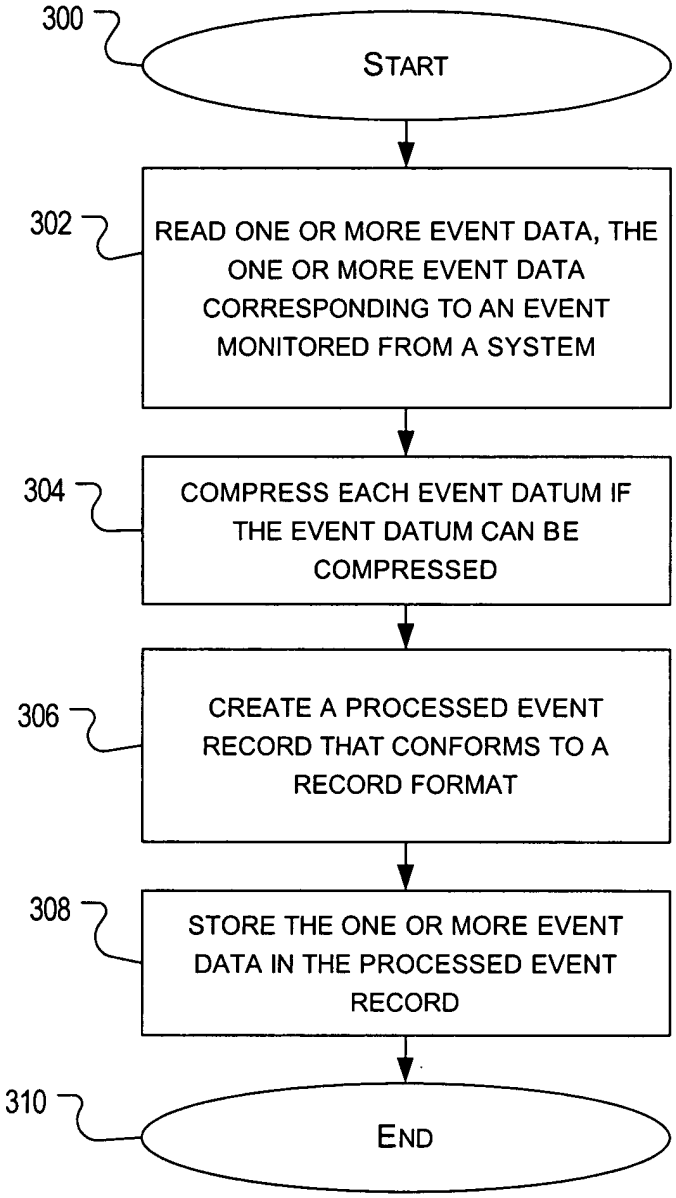
300
START
302
READ ONE OR MORE EVENT DATA, THE ONE OR MORE EVENT DATA CORRESPONDING TO AN EVENT MONITORED FROM A SYSTEM
304
COMPRESS EACH EVENT DATUM IF THE EVENT DATUM CAN BE COMPRESSED
306
CREATE A PROCESSED EVENT RECORD THAT CONFORMS TO A RECORD FORMAT
308
STORE THE ONE OR MORE EVENT DATA IN THE PROCESSED EVENT RECORD
310
END

FIG. 3

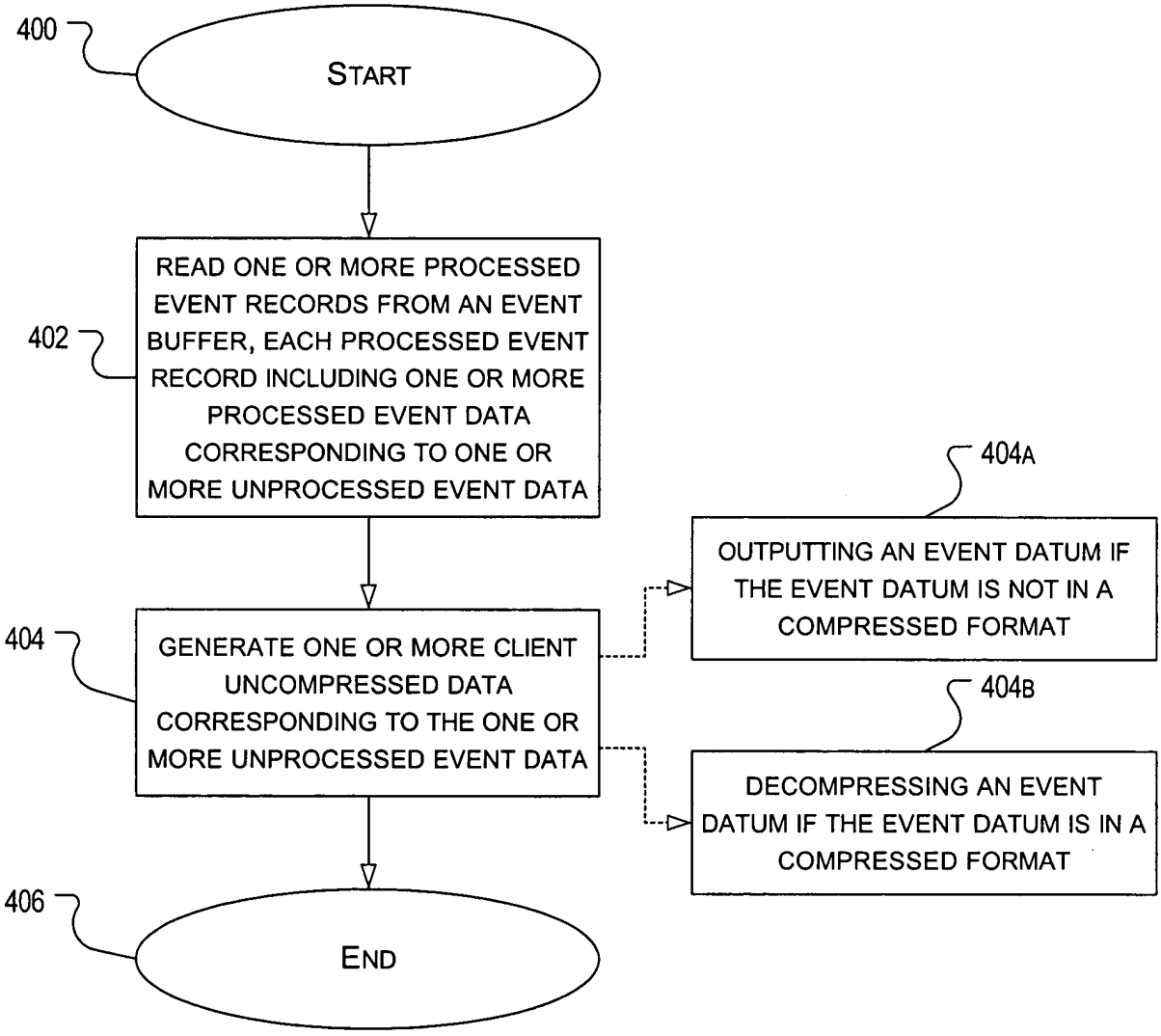
400
START
READ ONE OR MORE PROCESSED EVENT RECORDS FROM AN EVENT BUFFER, EACH PROCESSED EVENT RECORD INCLUDING ONE OR MORE PROCESSED EVENT DATA CORRESPONDING TO ONE OR MORE UNPROCESSED EVENT DATA
402
GENERATE ONE OR MORE CLIENT UNCOMPRESSED DATA CORRESPONDING TO THE ONE OR MORE UNPROCESSED EVENT DATA
404
404A
OUTPUTTING AN EVENT DATUM IF THE EVENT DATUM IS NOT IN A COMPRESSED FORMAT
404B
DECOMPRESSING AN EVENT DATUM IF THE EVENT DATUM IS IN A COMPRESSED FORMAT
406
END

FIG. 4

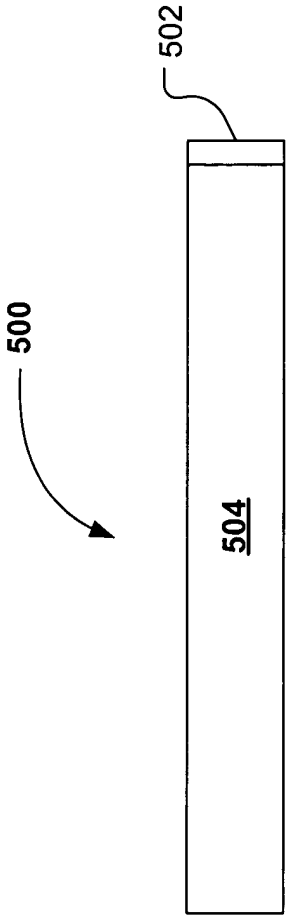

FIG. 5

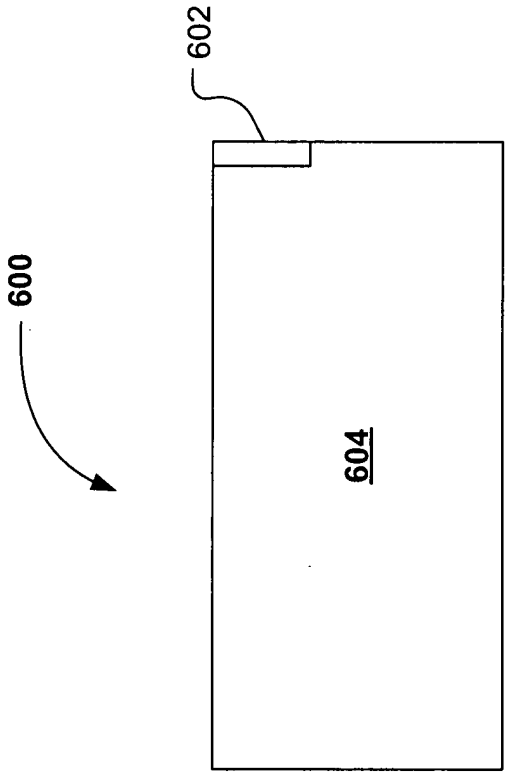

FIG. 6

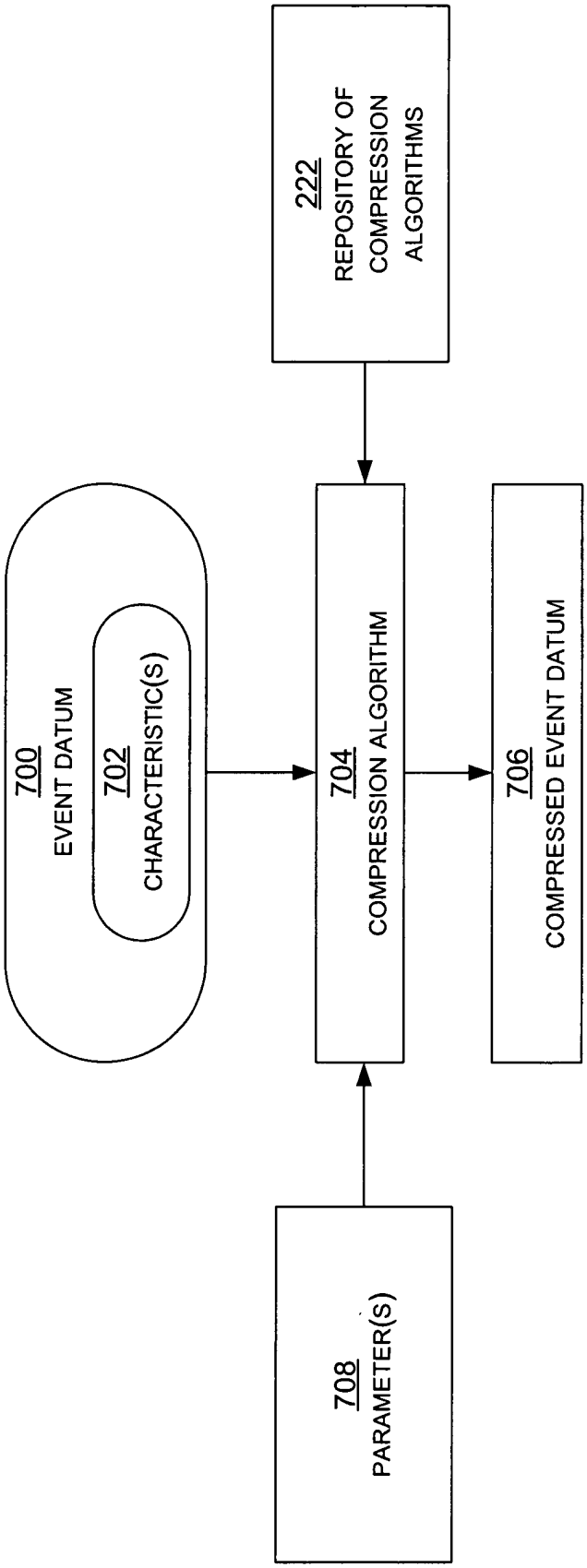
222
REPOSITORY OF COMPRESSION ALGORITHMS
700
EVENT DATUM
702
CHARACTERISTIC(S)
704
COMPRESSION ALGORITHM
706
COMPRESSED EVENT DATUM
708
PARAMETER(S)

FIG. 7

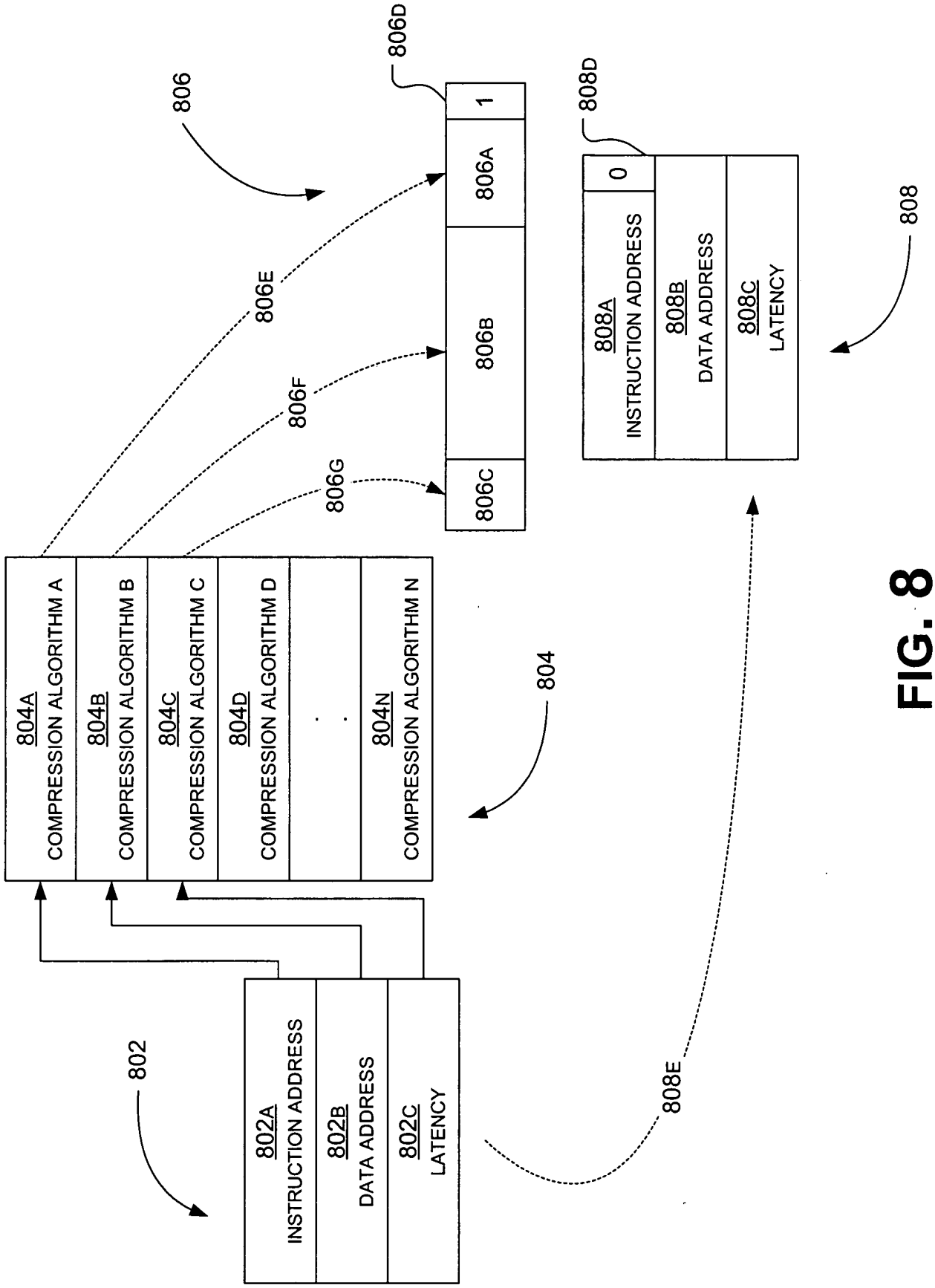
802
802A INSTRUCTION ADDRESS
802B DATA ADDRESS
802C LATENCY
804
804A COMPRESSION ALGORITHM A
804B COMPRESSION ALGORITHM B
804C COMPRESSION ALGORITHM C
804D COMPRESSION ALGORITHM D
804N COMPRESSION ALGORITHM N
806
806D
1
806A
806B
806C
806E
806F
806G
808
808D
0
808A INSTRUCTION ADDRESS
808B DATA ADDRESS
808C LATENCY
808E

FIG. 8

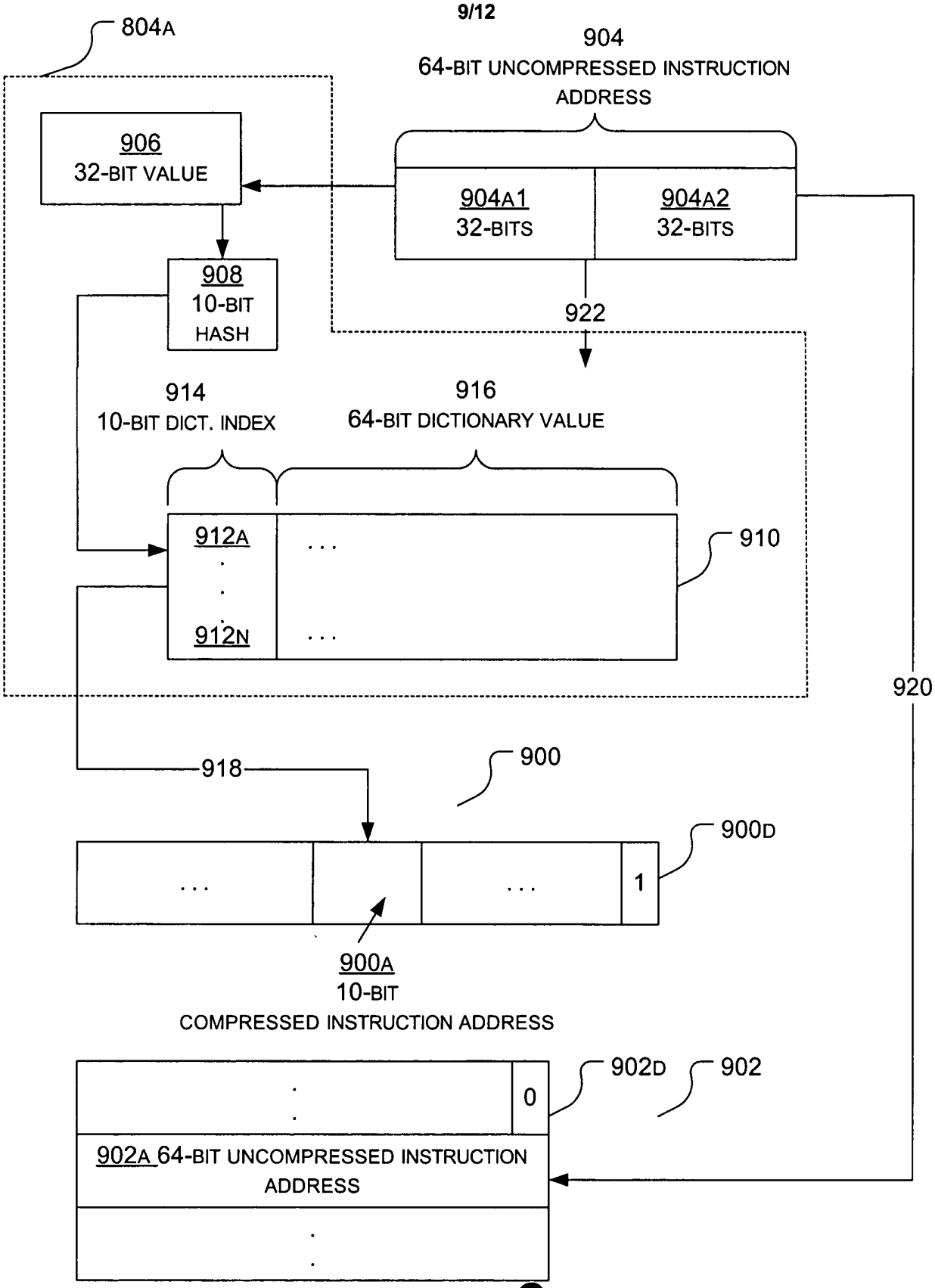
804A
904
64-BIT UNCOMPRESSED INSTRUCTION ADDRESS
906
32-BIT VALUE
904A1
32-BITS
904A2
32-BITS
908
10-BIT HASH
922
914
10-BIT DICT. INDEX
916
64-BIT DICTIONARY VALUE
912A
912N
910
920
918
900
900D
1
900A
10-BIT
COMPRESSED INSTRUCTION ADDRESS
902D
902
0
902A 64-BIT UNCOMPRESSED INSTRUCTION ADDRESS

FIG. 9

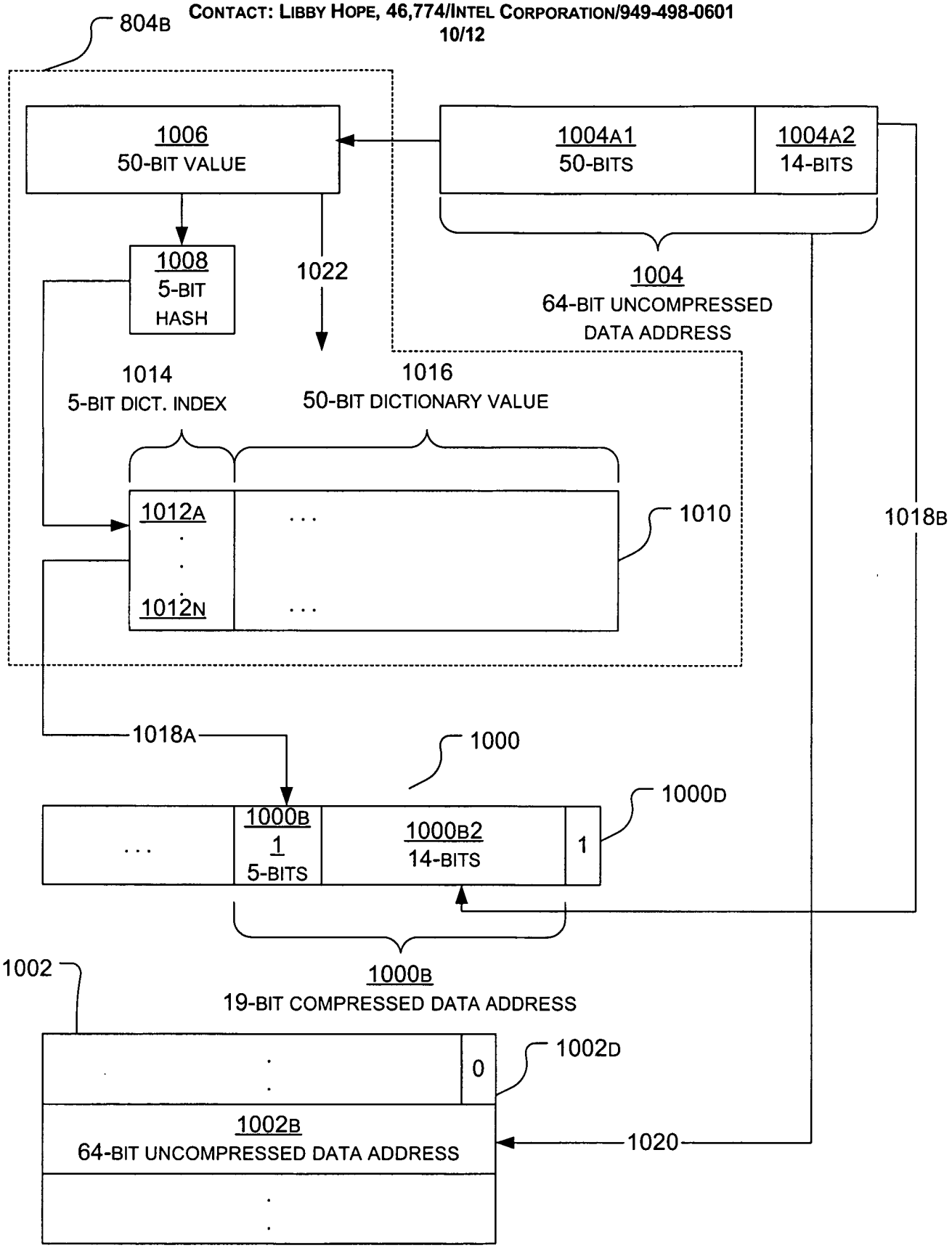
804B
1006
50-BIT VALUE
1004A1
50-BITS
1004A2
14-BITS
1008
5-BIT
HASH
1022
1004
64-BIT UNCOMPRESSED
DATA ADDRESS
1014
5-BIT DICT. INDEX
1016
50-BIT DICTIONARY VALUE
1012A
1012N
1010
1018B
1018A
1000
1000D
1000B
1
5-BITS
1000B2
14-BITS
1
1000B
19-BIT COMPRESSED DATA ADDRESS
1002
1002D
0
1002B
64-BIT UNCOMPRESSED DATA ADDRESS
1020

FIG. 10

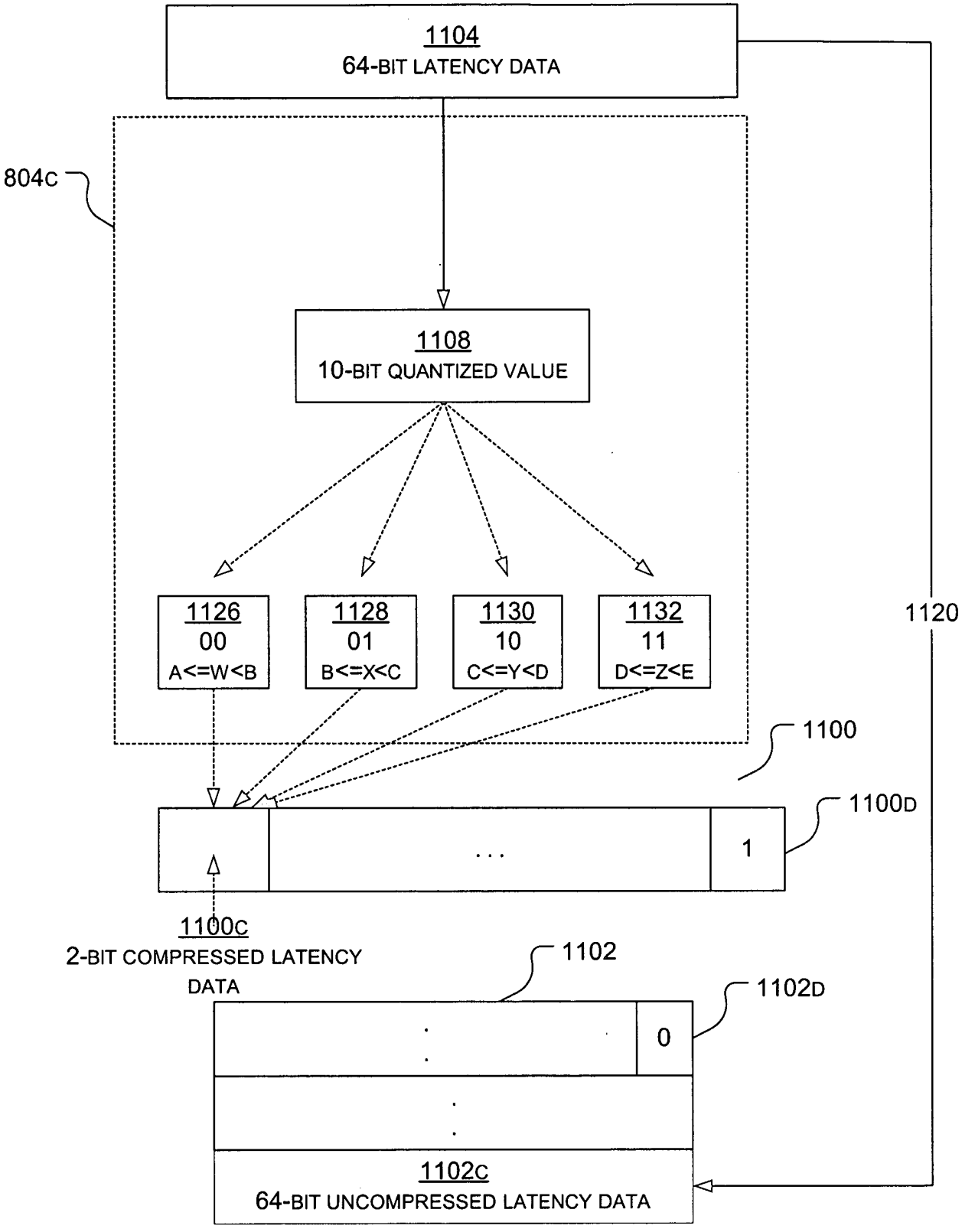
1104
64-BIT LATENCY DATA
804C
1108
10-BIT QUANTIZED VALUE
1126
00
A<=W<B
1128
01
B<=X<C
1130
10
C<=Y<D
1132
11
D<=Z<E
1120
1100
1100D
1
...
1100C
2-BIT COMPRESSED LATENCY DATA
1102
1102D
0
1102C
64-BIT UNCOMPRESSED LATENCY DATA

FIG. 11

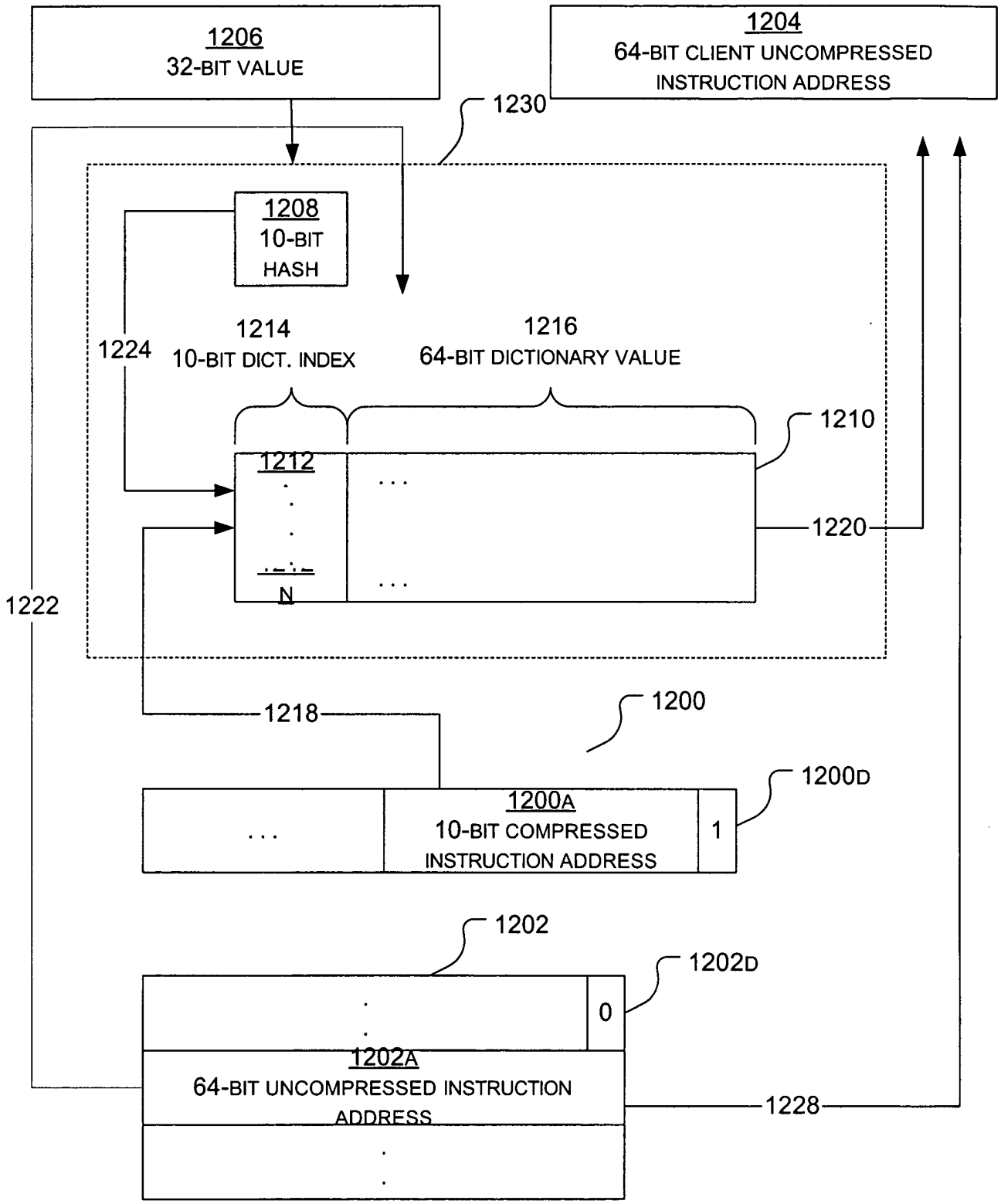
1206
32-BIT VALUE
1204
64-BIT CLIENT UNCOMPRESSED INSTRUCTION ADDRESS
1230
1208
10-BIT HASH
1214
10-BIT DICT. INDEX
1216
64-BIT DICTIONARY VALUE
1224
1210
1212
1220
N
1222
1218
1200
1200D
1200A
10-BIT COMPRESSED INSTRUCTION ADDRESS
1
1202
1202D
0
1202A
64-BIT UNCOMPRESSED INSTRUCTION ADDRESS
1228

FIG. 12